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Forecasting Trends in the Brisbane Central Business District Office Market

1.0 Introduction

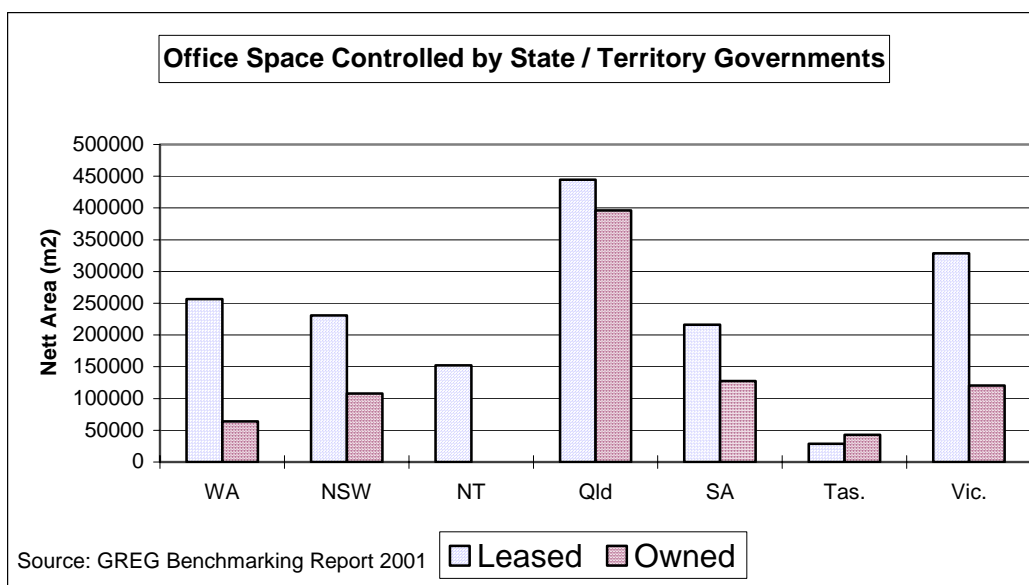
The Queensland Department of Public Works (DPW) holds a significant interest in the Brisbane Central Business District (CBD) in controlling approximately 20 percent of the office space within its confines. This comprises a total of 333,903 square metres of space, of which 170,111 square metres is owned and 163,792 square metres is leased from the private sector.

The department's nominal ownership extends to several enduring, landmark buildings as well as several modern office towers. The portfolio includes the oldest building in the CBD, being the former Commissariat Stores building and one of the newest, a 15,000 square metre office tower under construction at 33 Charlotte Street.



Commissariat Stores – Initial Construction 1828 33 Charlotte Street – Under Construction 2002

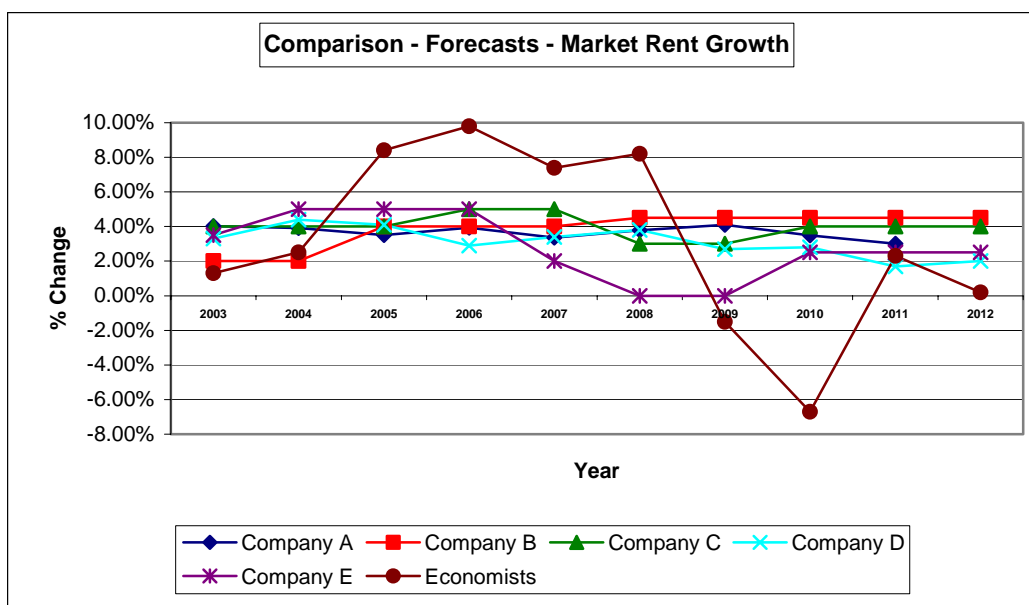
Queensland, unlike other states, has retained state ownership of a significant portfolio of commercial properties. The following chart displays a comparison of the state and territory owned and leased office space in 2001.



As a holder of a significant property portfolio, DPW often seeks property advice in the form of valuations, viability studies and market research. This advice regularly contains cash flow forecasts for market rents and building operating expenses. These forecasts are critical for generating property and lease assessments and this paper identifies variations in market rent forecasts from property advisers and economists. It also examines historical property market movements in the CBD and seeks to identify any relationships with economic factors such as employment and gross state product. With regard to forecasting property operating expenses for cash flows, the paper investigates whether the automatic adoption of forecast inflation escalations has a sound basis or otherwise.

2.0 Market Rent Forecasts

For comparative purposes, market rent forecasts from a number of property advisory firms have been charted below. In addition, a forecast for CBD market rent movements from a firm of economists has been plotted.

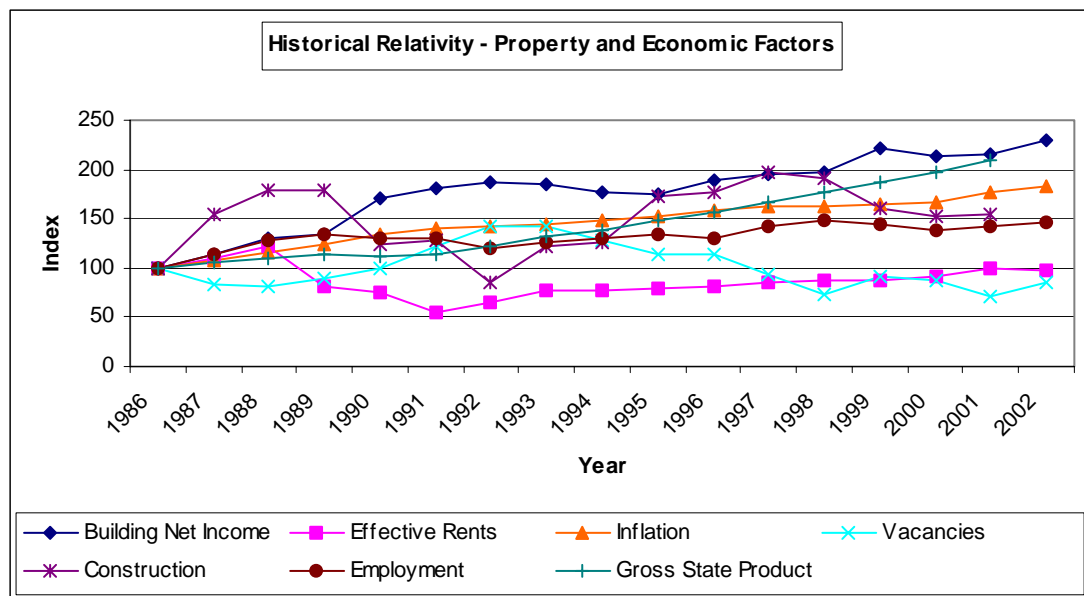


This analysis reveals significantly different interpretations for future rental movements in the CBD. While the property advisors' forecasts fall within a relatively narrow band, there are differences in perceptions as to when rents are anticipated to be rising and falling. Their forecasts display a degree of cyclicality, but are far less volatile than the economists' forecast. This has particular impact in the first few years of the cash flow horizons where the property advisors hold notably more conservative views on growth than the economists. The overall mean for the property advisors' ten year forecasts is 3.5% per annum while the economists' forecast derives a mean of 3.0% per annum.

3.0 Historical Relativity – Property and Economic Factors

Initial research has been undertaken to identify apparent historical relationships between property rents and other property and economic factors. For comparative purposes, the following data has been indexed and plotted in the chart on the next page:

Data	Description	Source
Building Net Income	Net rental income from a substantial sample of CBD office buildings.	Property Council of Australia Investment Performance Index
Effective Rents	Time series of estimated effective rents in CBD prime office buildings.	BIS Shrapnel
Inflation	All Groups Consumer Price Index for Brisbane.	Australian Bureau of Statistics
Vacancies	Brisbane CBD office vacancies.	Property Council of Australia and BIS Shrapnel
Construction	Value of Queensland non-residential construction.	Australian Bureau of Statistics
Employment	Employed persons in the Brisbane city inner ring.	Australian Bureau of Statistics
Gross State Product	Queensland GSP from Australian National Accounts.	Australian Bureau of Statistics and Qld Office of Economics and Statistical Research



A correlation analysis of this data derived the following results:

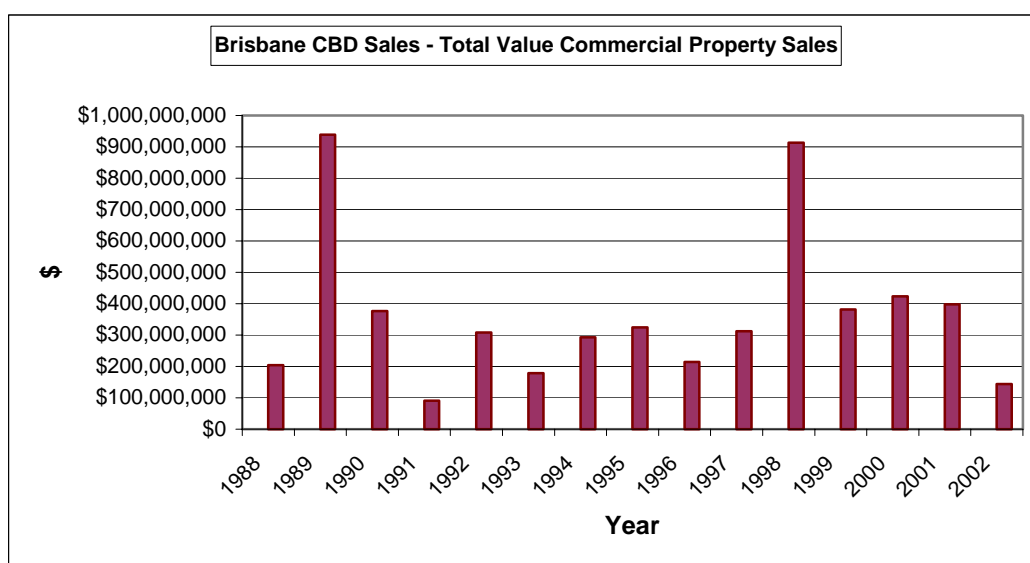
	Net Income	Effective Rent	CPI	Vacancies	Construction	Employment	GSP
Net Income	1.00						
Effect. Rent	-0.33	1.00					
CPI	0.97	-0.23	1.00				
Vacancies	0.00	-0.70	-0.11	1.00			
Construction	0.16	0.35	0.34	-0.62	1.00		
Employment	0.78	-0.09	0.83	-0.39	0.66	1.00	
GSP	0.83	0.03	0.91	-0.36	0.42	0.75	1.00

While significant further research is required involving a longer study period and further data disaggregation to draw sound conclusions, some initial observations from this analysis include:

- Net income growth displays strong positive correlation with inflation reflecting linkages with rent review mechanisms
- Negative correlation between effective rents and space vacancies indicates rents rise when vacancies reduce
- Positive correlation between effective rents and construction activity suggests increased rents drive demand for new buildings
- Negative correlation between vacancy rates and construction activity indicates low vacancies encourages increased construction
- Employment growth appears to be a positive driver for property income growth and construction activity
- State economic growth displays links with increased property income, employment and construction activity

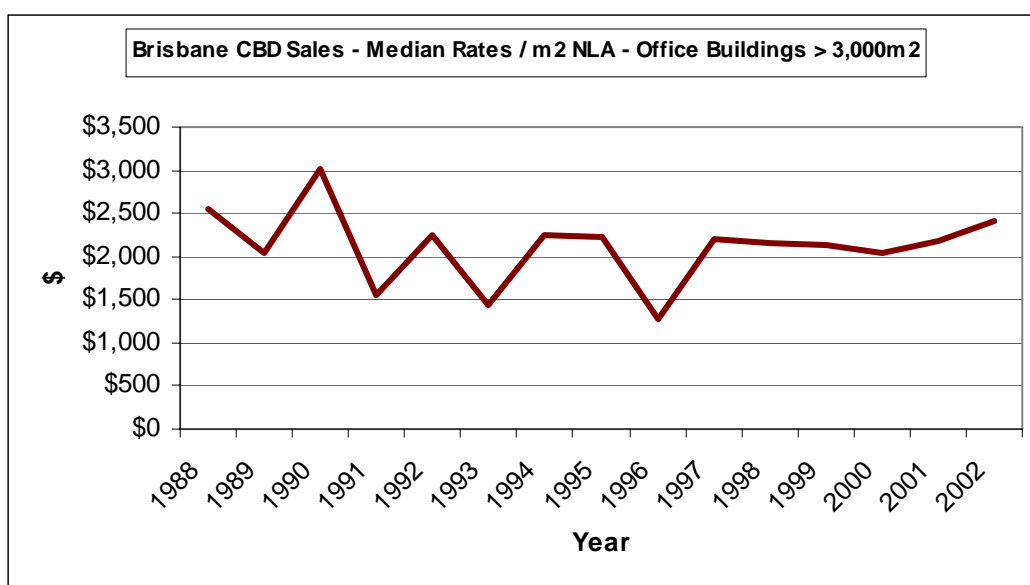
4.0 Property Market Activity

Brisbane CBD commercial sales transactions (excluding strata title units) since 1988 have been scheduled. The chart below displays the total annual sales activity for the period:



The average annual sales turnover for the period from 1988 to 2001 has been approximately \$380M. The median single transaction value has been approximately \$4M and the average annual number of transactions has been 27.

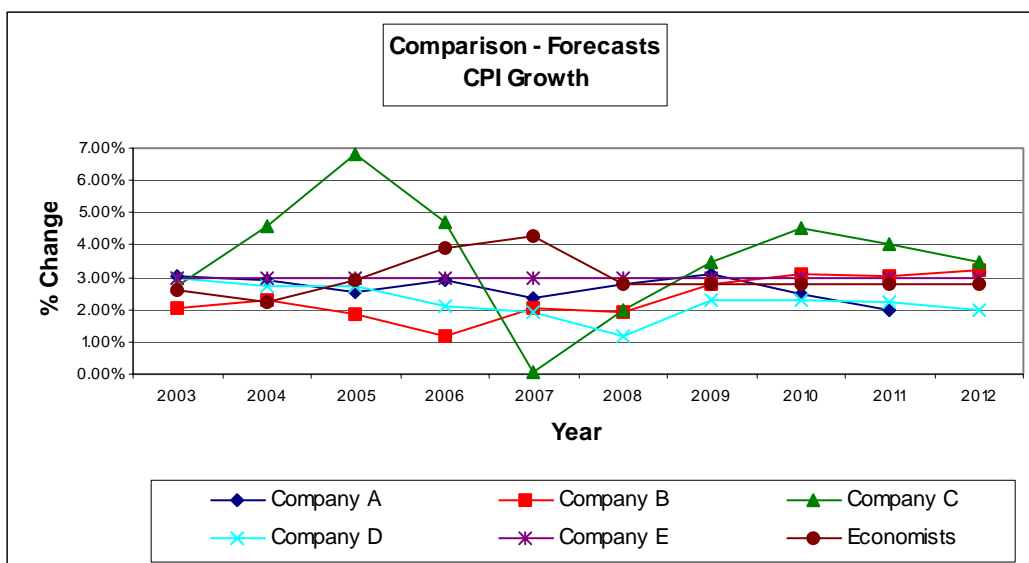
The sales have been analysed to derive dollar rates per square metre of net lettable area for office buildings over 3,000 square metres in area. A chart displaying the mean annual rates is below:



Sales for the last five years indicate a relatively consistent average rate at \$2,100 per square metre floor area. Sales for the first half of 2002 do, however, show some growth averaging at \$2,410 per square metre.

5.0 Forecasting Property Operating Expenses

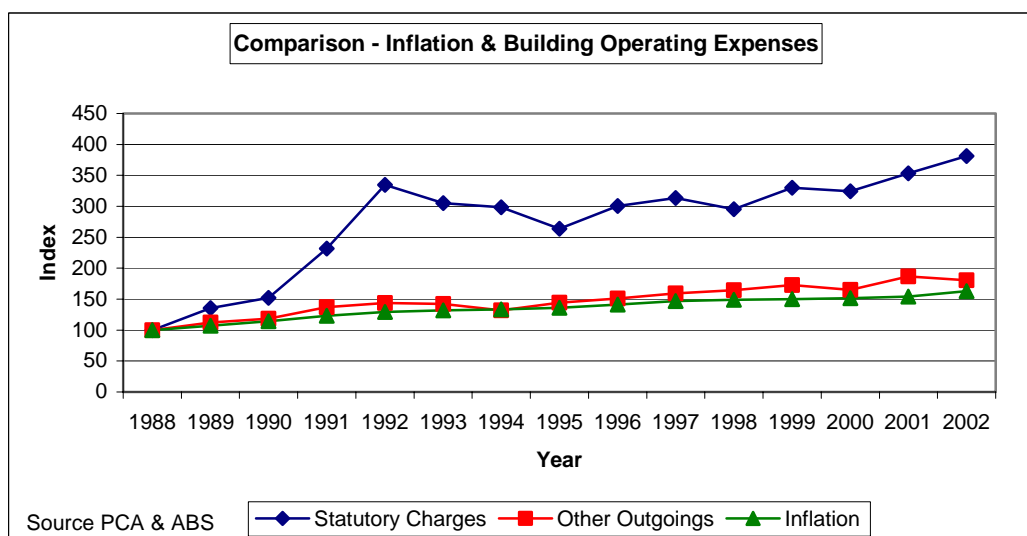
Individual property studies tend, as a matter of course, to apply inflation forecasts as a mechanism for escalating building operating expenses into the future. As for the market rent forecasts, the following chart displays several property advisory firms' predictions for operating expenses growth together with an economist's forecast for inflation:



This comparison exhibits some diversified perceptions of future inflation rates for Brisbane. While the forecast means fall within a narrow band at around 2.8% per annum over the ten year horizon, the forecasters have varying views on the timings of inflation rises and falls.

6.0 Historical Relativity – Property Operating Expenses and Inflation


Considering the movements of property operating expenses and inflation in a historical context, Property Council of Australia recorded median statutory charges and other outgoings for Brisbane sample buildings have been plotted against inflation for the period since 1988. The comparison is charted below:





Strong positive correlation (0.97) exists between inflation and non-statutory outgoings. This supports linking inflation forecasts with outgoings projections in cash flow analyses. However, while positive correlation has been evident between statutory property charges and inflation, history has shown exceptional growth in land values in the CBD can have a strong impact on growth in statutory charges. This was particularly apparent in the early 1990s.

7.0 Property Operating Expenses – Sample Buildings

To further investigate the relationship between inflation and property operating expenses, records for four sample government office buildings have been analysed. The buildings have been chosen to represent construction types in four different decades and three of the buildings have similar floor areas. Basic details of the buildings include:

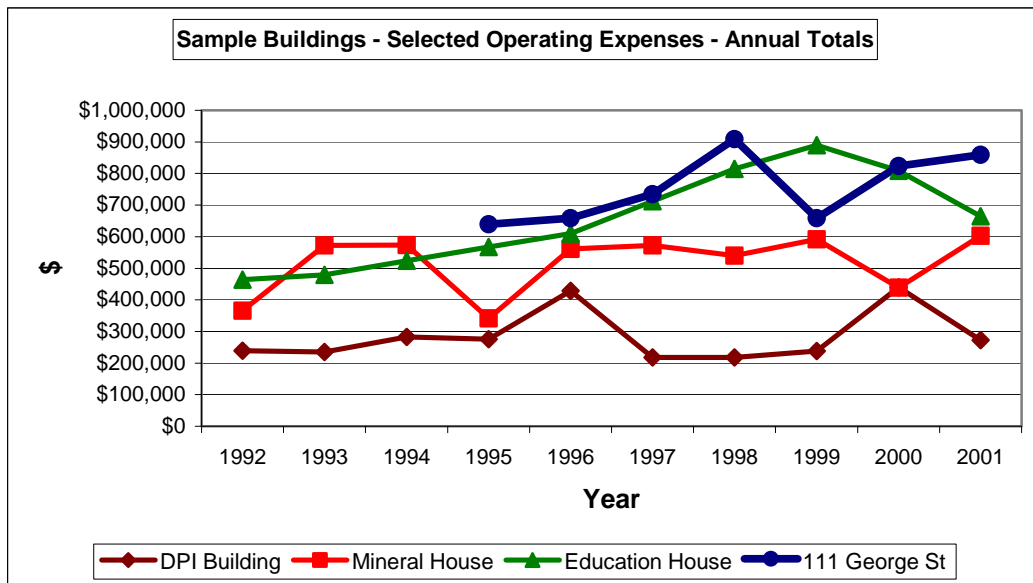
	
Primary Industries Building 62 Ann Street, Brisbane	Mineral House 41 George Street, Brisbane
Build Date – 1969	Build Date – 1979
Net Lettable Area – 14,393m ²	Net Lettable Area – 29,464m ²
Levels – 10	Levels – 27

	
Education House 30 Mary Street, Brisbane	111 George Street 111 George Street, Brisbane
Build Date – 1986	Build Date – 1994
Net Lettable Area – 22,380m ²	Net Lettable Area – 28,632m ²
Levels – 27	Levels – 27

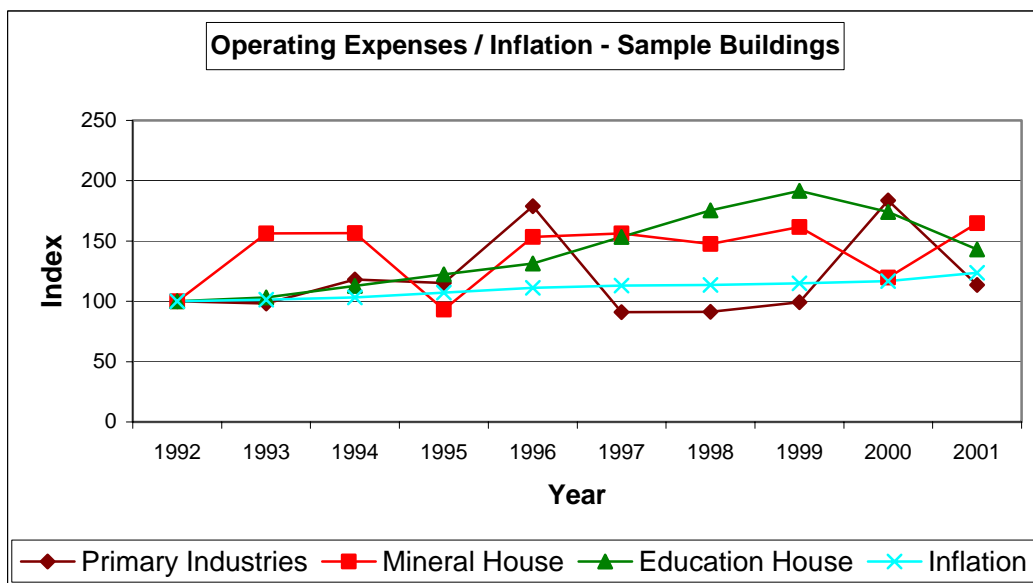
Data for selected operating expenses have been collected for a ten year period for the sample buildings. The categories of expenses included:

- Heating, ventilation and air conditioning
- Lifts and escalators
- Hydraulic services
- Generators / emergency power
- Electrical
- Fire systems
- Security
- Doors / locks
- Ceilings / grids
- Painting
- Floor coverings maintenance
- Windows maintenance
- Fixtures maintenance
- Building management systems

Being owner-occupied buildings, efforts have been made to exclude what would normally be considered to be lessees' liabilities in the analysis. The following chart plots the annual totals in nominal terms for these expenses for the four buildings:

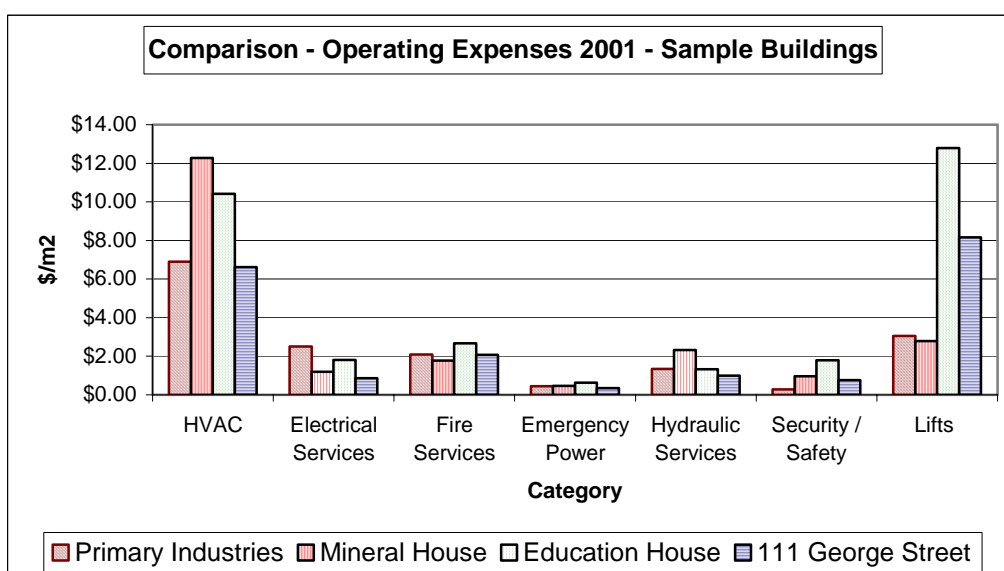


Ostensibly, this chart indicates the annual totals of the selected operating expenses vary from escalating in a standard inflationary pattern. Indexing the three of the buildings against inflation derives the following chart:



This analysis confirms, while there is a degree of positive correlation between inflation and the individual buildings' operating expenses, further research would be required to determine whether it is sound practice to automatically apply inflation forecasts in cash flow studies for individual buildings. Factors producing exceptions may relate to the age of the building and its position in terms of its lifecycle. The condition of the building and its plant would also be a consideration.

The operating expenses' profile can be shown to vary due to building age. The following chart displays selected operating expenses for the year 2001 on a rate per square metre floor area basis for the four sample buildings:



Opportunities for further research exist in this area in order to deliver guidance to property advisors.

8.0 Observations

Having regard to the foregoing, the following observations are proffered:

- Cash flow studies in the property arena display significant variances in market rent forecasts;

- Brisbane CBD property net income has exhibited positive correlation with inflation over the previous 15 years;
- Negative correlation between effective rents and vacancy rates indicates rents rise when vacancies fall;
- Negative correlation between vacancy rates and construction activity suggests low vacancy rates stimulate construction activity in the Brisbane CBD;
- Positive employment growth is an apparent driver for property income growth;
- Brisbane CBD office building sales over the past ten years have shown little or no real growth in prices per square metre floor area;
- Property advisors' cash flow studies display varying perceptions of forecast inflation rates over the next ten years;
- Historic Brisbane office building non-statutory outgoings display strong relativity with inflation;
- Statutory charges for Brisbane CBD properties are less positively correlated with inflation than other outgoings; and
- Operating expenses for a smaller sample of office buildings with varying ages display a reduced relativity with inflation over time.

Further research on these concepts is justified to provide guidance to property professionals and the Cooperative Research Centre for Construction Innovation Project 2001-011-5 (*Evaluation of Functional Performance in Commercial Buildings*) will be progressing further investigations during 2003-2004.

References

BIS Shrapnel 2002 *Brisbane Commercial Property – Market Forecasts and Strategies 2002 to 2016* Sydney

Property Council of Australia 2002, *Australian Office Market Report July 2002*, Sydney

Commercial Property Monitor Pty Ltd 2002, *Property Information Monitor Database*, Sydney

Cityscope Publications Pty Ltd 2002, *Brisbane Cityscope*, Sydney

Property Council of Australia 2002, *Market Performance Report June 2002*, Sydney

BIS Shrapnel 2002, *Long Term Forecasts Australia 2002 to 2017*, Sydney

Australian Bureau of Statistics 2002, *Catalogue No 6291.0.40.001 Labour Force (EM) Employed – Australia – Monthly*

Australian Bureau of Statistics 2002, *Catalogue No 8752.0 Building Activity, Australia, Table 26 Value of Non-Residential Building Commenced by State*

Australian Bureau of Statistics 2002, *Catalogue No 6401.0 Consumer Price Index, Australia*

Australian Bureau of Statistics 2002, *Catalogue No 5220.0 Australian National Accounts: State Accounts*